Refine Search

Search Results -

Terms	Documents
L12 and L2	11

Database:

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US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins
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Search: L14

[Refine Search]

[Recall Text] [Clear] [Interrupt]

Search History

DATE: Sunday, February 13, 2005   Printable Copy   Create Case

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L14	L12 and l2	11	L14
L13	l1 and l12	5	L13
L12	l4 near l6	253	L12
L11	l7 and L10	3	L11
L10	stop$3	2231765	L10
L9	l7 and L8	0	L9
L8	zone	909486	L8
L7	l5 and L6	3	L7
L6	distance	2549393	L6
L5	l3 and L4	3	L5
L4	parking or backup	161898	L4
L3	l1 same L2	21	L3
L2	low adj speed	164301	L2
L1	collision adj avoidance	5003	L1

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
L7 and L8	0

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L9

[Refine Search]

[Recall Text] [Clear] [Interrupt]

Search History

DATE: Sunday, February 13, 2005   Printable Copy   Create Case

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L9	l7 and L8	0	L9
L8	zone	909486	L8
L7	l5 and L6	3	L7
L6	distance	2549393	L6
L5	l3 and L4	3	L5
L4	parking or backup	161898	L4
L3	l1 same L2	21	L3
L2	low adj speed	164301	L2
L1	collision adj avoidance	5003	L1

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
L3 and L4	3

Database:

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US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins
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Search: L5

[Refine Search]

[Recall Text] [Clear] [Interrupt]

Search History

DATE: Sunday, February 13, 2005   Printable Copy   Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L5	l3 and L4	3	L5
L4	parking or backup	161898	L4
L3	l1 same L2	21	L3
L2	low adj speed	164301	L2
L1	collision adj avoidance	5003	L1

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
L6 and L17	10

Database:
US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L18

[Refine Search]

[Recall Text] [Clear] [Interrupt]

Search History

DATE: Sunday, February 13, 2005 Printable Copy Create Case

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L18	l6 and L17	10	L18
L17	l10 and L16	18	L17
L16	l4 and L15	37	L16
L15	low adj speed adj collision	286	L15
L14	L12 and l2	11	L14
L13	l1 and l12	5	L13
L12	l4 near l6	253	L12
L11	l7 and L10	3	L11
L10	stop$3	2231765	L10
L9	l7 and L8	0	L9
L8	zone	909486	L8
L7	l5 and L6	3	L7
L6	distance	2549393	L6
L5	l3 and L4	3	L5

L4	parking or backup	161898	L4
L3	ll same L2	21	L3
L2	low adj speed	164301	L2
L1	collision adj avoidance	5003	L1

END OF SEARCH HISTORY

L11: Entry 3 of 3   File: USPT   Dec 28, 2004

DOCUMENT-IDENTIFIER: US 6836717 B2
TITLE: Automotive bumper active energy absorption system

Detailed Description Text (6):
In operation, the active control system (hereinafter, "control system") 100
incorporates a data acquisition device 120 to obtain collision data. The data
acquisition device 120 is a sensing device such as, but not limited to, a
positional sensor, an accelerometer, a vehicle proximity system and the like. Such
terms as sensor, proximity system, accelerometer and data acquisition device are
taken to be equivalents and are used interchangeably throughout this specification.
Collision data is the generated output of a data acquisition device 120. Collision
data may be an analog or digitally encoded signal that represents a voltage or
current proportional to a physical deflection for example, or other information
such as measured or estimated velocities, for instance. A vehicle proximity system
such as a Park Distance Control, Intelligent Cruise Control, or a type of Doppler
proximity detection and the like, may be configured to determine closing rates for
objects approaching a vehicle. Proximity systems are therefore capable of providing
multiple types of collision data, such as closure rates, time to impact and
estimated forces, among others and in several forms including, but not limited to,
data structures, scripts or other types of executable code.

Detailed Description Text (29):
A modern automobile is a wonder of integration. Many automobiles include
centralized electronic engine and system management functionality, including
extensive diagnostic functions through a vehicle "brain" computer system. The
system of the invention is capable of sensing an imminent low-speed collision and
configuring the bumper to reduce the impact damage with the addition of a collision
avoidance system employing a form of radar to provide constant data to the vehicle
computer. The computer is enabled to recognize the collision data and to call
separate subroutines or enable dedicated systems to both modulate the brake system
and to configure the bumper dampers all in real time.

Detailed Description Text (30):
For example, a system-enabled automobile is navigating a parking lot. A second
vehicle begins backing out of a parking space a few feet in front of the system-
enabled automobile which triggers the collision avoidance system. The driver of the
system-enabled automobile may or may not be applying force to the brake pedal, as a
collision avoidance system is able of braking for the driver. The system-enabled
auto is initially traveling at a low speed and an imminent collision will occur
with a remaining speed of about 5 miles per hour at the collision point. The bumper
dampers are configured for a low-speed impact based on data provided by the
collision avoidance system.

Detailed Description Text (31):
In a second example, a system enabled automobile has a positional sensor mounted in
the bumper. A driver of the vehicle approaches a red light with several cars in
line in front. The roads are coated with compact snow and ice. The driver begins to
slow 100 feet before the stopped cars but encounters the ice. The driver applies

full braking force and then pumps the brake pedal in an attempt to avoid a collision. The vehicle slows and eventually slides into the back of the automobile directly to the front. As the collision occurs at a low speed, the positional sensor detects a deflection of the bumper and the system configures the bumper damper to have full soft damping. The bumper is able to absorb the collision force with no damage to the vehicle. Additionally, the same scenario could have a third automobile colliding with the rear of the system-enabled vehicle with the same result; that is, a low-speed rear-end collision that causes no damage to the system-enabled vehicle. The system of the invention is equally able of retrofit to existing automobiles, where a bumper system containing the system is fitted to the front or rear.